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AUG 23 2006

REMARKS

Claims 23-26, 28-32, 34, 36-42, 44-50, 52-58, and 60-65 are pending. Claims 34-65 are rejected under 35 U.S.C. §112, second paragraph. Claims 23-33 are rejected under 35 U.S.C. §103(a), as being unpatentable over Alamouti et al. (U.S. Pat. No. 6,775,329) in view of applicants' admitted prior art. Claims 23, 25, 29, 31-32, 34, 36-42, 44-47, 50, 52-56, 58, and 60-63 are currently amended. Claims 27, 33, 35, 43, 51, and 59 are cancelled without prejudice.

Claims 34-65 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 26-45 of copending Application Ser. No. 10/601,866. Applicants wish to defer a terminal disclaimer until claims are allowed in the copending Application.

Claims 34-65 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Examiner further states claims 34-65 are incomplete for omitting essential elements. Applicants have adopted most of Examiner's suggested amendments with some differences. Limitations from claim 35 are added to claim 34. Claim 35 is cancelled without prejudice. Limitations from claim 43 are added to claim 42. Claim 43 is cancelled without prejudice. Limitations from claim 51 are added to claim 50. Claim 51 is cancelled without prejudice. Limitations from claim 59 are added to claim 58. Claim 59 is cancelled without prejudice.

Referring to Figures 2 and 3 of the instant specification, for example, claim 34 recites "A circuit, comprising: a correction circuit (Figure 3) coupled to receive a first symbol ( $S_1$ ) transmitted from a first antenna (ANT 1) at a one time (T) and a complement of a conjugate of a second symbol ( $-S_2^*$ ) transmitted from a second antenna (ANT 2) at the one time (T), and coupled to receive the second symbol ( $S_2$ ) transmitted from the first antenna (ANT 1) at another time (2T) and a conjugate of the first symbol ( $S_1^*$ ) transmitted from the second antenna (ANT 2) at the another time (2T), the correction circuit producing a first symbol estimate in response to a first symbol ( $S_1$  from  $R_1^1$ ) and the conjugate of the first symbol ( $S_1^*$  from  $R_2^2$ ); and a combining

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circuit (820, Figure 8) coupled to receive a plurality of symbol estimates including the first symbol estimate, the plurality of symbol estimates corresponding to a respective plurality of signal paths (Equations 5 and 6,  $i=0$  through  $2N-1$ ), the combining circuit (820, Figure 8) producing a first symbol signal ( $\tilde{S}_1$ ) in response to the plurality of symbol estimates." (numerals added). Other claims are amended for consistency. Claims 34, 36-42, 44-47, 50, 52-56, 58, and 60-63, as amended, are definite and particularly point out and distinctly claim the subject matter which applicant regards as the invention. Thus, claims 34, 36-42, 44-50, 52-58, and 60-65 are patentable under 35 U.S.C. §112, second paragraph.

Claims 23-33 are rejected under 35 U.S.C. §103(a), as being unpatentable over Alamouti et al. (U.S. Pat. No. 6,775,329) in view of applicants' admitted prior art. Examiner specifically refers to Figure 4 and Table 1 of Alamouti et al. Claims 23, 25, 29, 31-32, as amended, define a very different encoding and decoding scheme from Alamouti et al. In particular, Alamouti et al. produce symbols  $s_0$  and  $-s_1^*$  from Antenna 11 and symbols  $s_1$  and  $s_0^*$  from Antenna 12. Examiner will note that a conjugate is produced from each transmit antenna at alternating symbol times. This means that the scheme of Alamouti et al. is not backwards with existing receivers without space time diversity. The present invention, however, encodes and decodes symbols  $S_1$  and  $S_2$  from ANT 1. This is highly advantageous in maintaining backwards compatibility with existing receivers. Thus, claims 23-26 and 28-32 are patentable under 35 U.S.C. §103(a) over Alamouti et al. in view of applicants' admitted prior art.

In view of the foregoing, applicants respectfully request reconsideration and allowance of claims 23-26, 28-32, 34, 36-42, 44-50, 52-58, and 60-65. If the Examiner finds any issue that is unresolved, please call applicants' attorney by dialing the telephone number printed below.

Respectfully submitted,



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